TOXIC SUBSTANCES CONTROL ACT – NEW AND EXISTING CHEMICALS PROGRAM

COMPLIANCE MONITORING INSPECTION REPORT

The Chemours Company

Fayetteville Works
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Fayetteville, NC 28306-7332

Report Date: April 24, 2018

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Inspection Dates: June 28 - 29, 2017

INFORMATION REDACTED (BLACKED OUT) IN THIS REPORT IS INFORMATION PROVIDED TO THE EPA REGION 4 BY THE FACILITY WITH A TSCA CBI CLAIM PURSUANT TO TSCA SECTION 14(C), REQUEST FOR NONDISCLOSURE

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ACRONYMS

[redacted]

ADME	Absorption, Distribution, Metabolism, Excretion
[redacted]	
APF	Applied Protective Factor
APFO	Ammonium perfluorooctanoate
ASE	Accelerated Solvent Extraction
CASRN	Chemical Abstracts Service Registration Number
CBI	Confidential Business Information
CDR	Chemical Data Reporting
[redacted]	
DCO	Document Control Officer
EPA	U.S. Environmental Protection Agency
ERG	Eastern Research Group, Inc., Contractors to the EPA
[redacted]	
LLC	Limited Liability Company
NCEL	New Chemical Exposure Limits
NCDEQ	North Carolina Department of Environmental Quality
NOC	Notice of Commencement
OCSPP	EPA's Office of Chemical Safety and Pollution Prevention
P&ID	Piping and Instrumentation Diagram
[redacted]	
PAIR	Preliminary Assessment Information Rule
PBT	Persist in the environment/could bio-accumulate/toxic to people, wild mammals, & birds
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
[redacted]	
PMN	Premanufacture Notice
[redacted]	
PPVE	Perfluoropropyl vinyl ether
[redacted]	
SNUN	Significant New Use Notice
SNUR	Significant New Use Rule
TSCA	Toxic Substances Control Act
WWTP	Waste Water Treatment Plant

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SUMMARY

The Chemours Company FC, LLC (Chemours) is a chemical manufacturer, processor and exporter as defined under the Toxic Substances Control Act (TSCA). On June 28 - 29, 2017, a TSCA compliance monitoring inspection was conducted by the U.S. Environmental Protection Agency at the Chemours' Fayetteville Works Facility located at 22828 NC Highway 87 West, Fayetteville, North Carolina (the Facility). The inspection was conducted due to community concerns with the reported release of potentially harmful chemicals, associated with Chemours' GenX process, into the Cape Fear River, a source of drinking water supply for numerous counties in North Carolina.

Chemours represents that GenX is a technology developed by E. I. du Pont de Nemours and Company (DuPont) and now used by Chemours to manufacture high-performance fluoropolymers without the use of perfluorooctanoic acid (PFOA). The GenX technology is used at the Facility in the [redacted]

[redacted]

Based on oral and written statements provided by Chemours, during the production of PPVE [redacted]

During the inspection, Chemours stated that after June 21, 2017, the Facility began collecting the aqueous waste generated in the wet scrubber and storing it in temporary storage tanks. The Facility then ultimately ships the waste to an offsite facility for incineration rather than directing it to the WWTP which was discharged to the Cape Fear River. [redacted] (Section 2.4.2) of this report.

Based on inspection observations and the review of records provided by Chemours, the Facility: (1) manufactured, processed, exported and/or distributed in commerce, several chemical substances subject to TSCA; [redacted]

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SCOPE

The scope of this inspection includes a review of Chemours' compliance with TSCA Sections 4, 5, 8, 12 and 13 which covers activities that occurred at the Facility on or before June 29, 2017, (the final date of the inspection). Between June 29, 2017, and March 14, 2018, the EPA submitted several follow up information request letters to Chemours. Between July 1, 2017, and March 29, 2018, Chemours responded to the EPA's information request letters.

In addition to documenting facts and observations based on the inspection and information provided by Chemours, some preliminary evaluation of compliance with TSCA is included in this inspection report.

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1. INTRODUCTION

In June 2017, in response to the community's concerns about the reported release of potentially harmful chemicals (GX902 and GX903) into the Cape Fear River by Chemours' Fayetteville Works Facility, North Carolina (the Facility), the U.S. Environmental Protection Agency commenced a Toxic Substances Control Act (TSCA) investigation. The chemicals of concern were associated with the GenX technology developed by E. I. du Pont de Nemours and Company (DuPont). The GenX technology is now used by Chemours to manufacture high-performance fluoropolymers without the use of Perfluorooctanoic acid (PFOA). Based on this information, the EPA immediately began investigating these concerns.

[redacted] the EPA received two TSCA Premanufacture Notices (PMNs) from DuPont. The notices were submitted pursuant to TSCA Section 5. The PMN number [redacted] was assigned to the chemical substance with the generic chemical identity, perfluorinated aliphatic carboxylic acid (Chemical Abstracts Service Registration Number [redacted] and PMN number [redacted] was assigned to the chemical substance with the generic chemical identity, [redacted]. In the PMNs, DuPont claimed the specific chemical identities and the CASRNs of the chemical substances as TSCA Confidential Business Information (CBI). This claim was not made in later documents submitted to the EPA by Chemours.

[redacted], the EPA and DuPont entered into a final TSCA Section 5(e) Consent Order (the Consent Order) governing the manufacture, processing, use, distribution in commerce, release and disposal of the PMN substances [redacted] Section V of the Consent Order includes, the following conclusions: [redacted].

The Consent Order indicates that the EPA concerns were based on data collected on the PMN substances, analogous to other similar chemicals, and to PFOA [redacted] which were both under review by EPA for similar PBT concerns. PFOA and its salt, Ammonium perfluorooctanoate (APFO), are long-chain synthetic perfluorinated chemicals (C8), which have human health and environmental concerns, and have been used in the manufacture of products such as Teflon®. Due to the possibility or likelihood of the use as a major substitute for PFOA, the EPA states in the Consent Order, "more information is needed on the toxicity and pharmacokinetics of the PMN substance [redacted] that will be applied to the characterization of both PMN substances" and also noted the "high concern for possible environmental effects over the long-term."

Due to the stated concerns of the EPA, the Consent Order authorized the manufacture of the PMN substances, but under the terms in Section II (Control of Effluent and Emissions), the EPA noted that DuPont "shall recover and capture (destroy) or recycle the PMN substances at an overall efficiency of 99% from all effluent process streams and air emissions (point source and fugitive)."

Pursuant to Section V of the Consent Order, (Successor Liability Upon Transfer of Consent Order), a "Successor in Interest" means a person outside the Company who has acquired the Company's full interest in the rights to manufacture the PMN substances, including all ownership rights and legal liabilities, through a transfer document signed by the Company, as transferor, and the Successor in Interest, as transferee. According to the Transfer Notice submitted to the EPA by Chemours, the effective date of the transfer of the manufacture rights and interest for the chemicals subject to the Consent Order was February 1, 2015, (See Exhibit B1 – DuPont/Chemours Notice of Transfer Document).

2. INSPECTION

2.1. Inspection Notice

To determine Chemours' compliance with the Consent Order for the PMN substances and with other requirements of TSCA, the EPA determined that an on-site TSCA compliance monitoring inspection was warranted. An inspection team was organized and included Verne George, EPA Region 4 lead TSCA inspector and Keith Bates, EPA Region 4 TSCA Co-inspector, with expertise in addressing confidentiality of TSCA CBI claims. The TSCA inspection team also included Daryl Hudson and Dan-Tam Nguyen, (experts in chemical processes and manufacturing) from Eastern Research Group, Inc. (ERG), contractors to the EPA with EPA TSCA inspection credentials.

On June 22, 2017, Verne George contacted Mr. Michael Johnson, Environmental Manager, for the Chemours operations at the Facility and former employee of DuPont to schedule a "for cause TSCA compliance monitoring inspection" to determine Chemours' compliance with TSCA Sections 4, 5, 8, 12, and 13. Based on the discussions with Mr. Johnson, the inspection was scheduled for June 28 - 29, 2017.

On June 22, 2017, the EPA Region 4, Chemical Management and Emergency Planning Section mailed an inspection notice (letter) to Chemours confirming the inspection date and requesting certain identified records be made available for review during the inspection. A copy of the letter was also emailed to Mr. Johnson on June 22, 2017, (See Exhibit A1 – Notice of Inspection Letter).

2.2. Inspection Entry

The final inspection team included all the planned inspection team members as follows:

Verne George	TSCA Lead Inspector (EPA Region 4)
Keith Bates	TSCA Co-inspector/TSCA CBI Document Control Officer (DCO) (EPA Region 4)
Daryl Hudson	TSCA Co-inspector (ERG)
Dan-Tam Nguyen	TSCA Co-inspector (ERG)

On June 28, 2017, the inspection team arrived at the facility security office at approximately 8:50 am. The security office called Mr. Johnson who shortly arrived at the security office to guide the inspection team to the main office building. Mr. Bates collected a small map of the Facility at the security office from a stack of such maps in plain view and available for site visitors after asking permission from the security guard (See Exhibit A5 - Document Number: 0101F1908562817: Site Map).

Upon arrival at the main office building, the inspection team signed in and was provided facility identity badges. The inspection team was escorted to a conference room and as the first step of the opening

conference each inspection team member presented their EPA credentials to the following Chemours representatives:

Ellis McGaughy	Fayetteville Works Manager;
Laura Korte	Global Product Manager;
Michael Johnson	Fayetteville Works Environmental Manager; and
Joel Blake	Fayetteville Works Environmental Health & Safety Manager.

Mr. George informed Chemours that the inspection was being conducted pursuant to TSCA Section 11 to determine compliance with TSCA Sections 4, 5, 8, 12, and 13. Mr. Johnson signed a TSCA Notice of Inspection (Form 7740-3) and Confidentiality Notice (Form 7740-4). The original copies were given to Chemours and a copy of each form was provided to the EPA (See Exhibit A2 – Notice of Inspection Form and Exhibit A3 – TSCA Inspection Confidentiality Notice).

Mr. George explained that the inspection would consist of: an opening conference with facility staff about the company, the nature of the company's business, chemical imports/exports and production processes; a tour of the facility; a private discussion and review of information provided by the facility that would only include the EPA representatives; and a closing conference with the Chemours representatives.

Mr. Bates explained the TSCA Inspection Confidentiality Notice and indicated that to ensure confidentiality of documents provided by the Facility, the Facility must make a TSCA CBI claim as documents are provided. Mr. Bates also indicated that no documents claimed by the Facility to contain TSCA CBI would be taken with the inspectors at the conclusion of the inspection. However, any such documents needed by the inspectors must be sent to his attention by mail after the inspection in an inner envelope marked "TSCA CBI – To Be Opened By Addressee Only," and an outer envelope with the EPA Region 4 mailing address. The facility was also directed to mail, in the same manner, copies of the documents to the ERG contractor's TSCA CBI Document Control Officer (DCO) at the ERG address provided.

2.3. Opening Conference

2.3.1. Introduction

Included in Section 2.3.2. of this report is a summary of the opening conference. Compliance evaluation is generally determined by the review of appropriate records provided by the facility. Details of the review of the information provided to the inspection team at the time of the inspection, and information provided by Chemours after the inspection, are discussed in Section 3.0 of this report.

2.3.2. Summary

An overview of information about the Facility was provided by Mr. Johnson in a slide show presentation. A hard copy of the slide show presentation was provided to the inspection team (See Exhibit A6 - Document Number: 0201F1908562817: Presentation, Fayetteville Works Overview). The summary indicated that Chemours owns the entire Facility. DuPont and Kuraray America, Inc., also operate at the Facility and all share the utilities, roads, grounds and emergency response responsibilities.

- The Facility was constructed by DuPont between 1968 and 1971. Production began in May 1970.

- The Facility consists of approximately 2,150 acres with approximately 400 acres within the fence line and is situated along the Cape Fear River.

- Chemours was a wholly owned subsidiary of DuPont when it acquired the Facility from DuPont on February 1, 2015. Chemours later spun off from DuPont on July 1, 2015.

- Chemours operates the following manufacturing areas at the Facility: (1) Nafion® IXM; (2) Polymer Processing Aid; (3) Monomers; and (4) Power/Utilities/WWTP.).

In the opening conference, Mr. Johnson indicated that the GenX technology is used in the [redacted] process at the Facility and that the [redacted] produces the chemical substances covered under the Consent Order [redacted]. Based on information provided by Chemours, the end products from the [redacted] include various concentrations of [redacted]. These products are identified by Chemours as GX902, GX903, GX905C and GX905D. Further description of these chemical substances can be found in Section 3.0 of this report.

Mr. Johnson asserted that the chemicals from the [redacted] covered in the Consent Order are not released into the Cape Fear River and that all of the waste generated from the [redacted] is trucked to an offsite disposal facility. Mr. Johnson indicated that some of the [redacted]. He also stated that dependent upon various conditions such as the pH level in the outfall, the chemical, GX903 [redacted] can form in the river. This CASRN [redacted]) is the same CASRN as the chemical that EPA assigned PMN number [redacted]. Mr. Johnson indicated that the Consent Order applies to the [redacted] and not the PPVE process, but due to the community concerns, beginning June 21, 2017, waste from the PPVE process has been collected in temporary storage tanks and will ultimately be shipped for incineration at an offsite facility when a contract is finalized.

The production managers for [redacted] discussed the processes during the opening conference. Summary flow charts for both the [redacted] and PPVE were provided to the inspection team, a TSCA CBI claim was made for the [redacted], but not for the PPVE flow chart.(See Exhibit A7 - Document No. 0301F1908562817: PPVE Flow Chart). All the copies of the summary flow chart for the [redacted] were returned to Mr. Johnson after the discussion due to Chemours' TSCA CBI claim on the process. To ensure that the inspection team fully understood the processes, both production managers were asked to create written summaries of the [redacted] and PPVE processes. The summaries were sent to the EPA and ERG after the inspection.

During the discussion of worker protection requirements required under the Consent Order, Chemours provided documentation that modifications to the Consent Order, as requested by DuPont, were approved by the EPA on February 1, 2010 (See Exhibit A8 - Document No. 0401F1908562817: EPA Consent Order Modification Letter, February 1, 2010).

2.4. Facility Tour

2.4.1. Introduction

As requested, Chemours gave the inspection team a tour of the Facility. The tour mainly focused on the [redacted] and PPVE processes. Chemours provided the EPA inspectors with fire resistant jump-suits and rubber gloves. The inspectors used their own hard hats, safety shoes, safety glasses and hearing

protection. The inspection team requested the tour to gain a general perspective and knowledge of the production areas to facilitate later review of summary flow charts, process diagrams and other operations information.

2.4.2. Summary

PPVE Process Area

The first area toured during the inspection was the PPVE process area. This area is described as the Nafion® IXM Monomers area and is the location of the Facility waste water treatment plant (WWTP). This area is on the east side of the Facility and is approximately 2,000 feet from the Cape Fear River. The land between the PPVE process area and the river is mostly wooded.

For the PPVE process, Chemours did not provide any information on releases of GX902 or GX903. Chemours did provide the following information indicating: (1) [redacted]; and (2) the [redacted]. Assuming all the [redacted] is converted to GX903 or GX902 and is incinerated at the same efficiency as provided for the [redacted] waste streams, the percentage released is [redacted]. There was not enough information provided to the inspection team to calculate the [redacted] in/out of the [redacted]. Chemours also indicated that as of June 21, 2017, KOH scrubber wastes are no longer being sent to the WWTP (collected and incinerated/deep well injected).

[redacted] Process Area

The next area toured during the inspection was the [redacted] area. [redacted]. Based on the [redacted] Flow Diagram and [redacted] Process Summary, Exhibits B11 and B12, [redacted]

The information provided by Chemours during and subsequent to the inspection indicates that the estimated annual air releases from the [redacted] are less than [redacted] percent. Chemours released approximately [redacted] from the [redacted] process. Based on Chemours batch sizes, batches/year, and annual production volume estimates, the percentage released is calculated to be approximately [redacted] percent. For details on the [redacted] estimate emissions, see Exhibit B42 - Air Emission Data.

2.5. Closing Conference

The inspection team concluded the first inspection day, June 28, 2017, at approximately 3:30 pm and scheduled the closing conference for the next day. The inspection team arrived at the main office building at approximately 9:00 am on June 29, 2017. Mr. Johnson assisted the inspection team in obtaining facility badges and escorted the team to the conference room. The inspection team held an

inspection team only private meeting at the beginning of the second inspection day to discuss topics needing clarification.

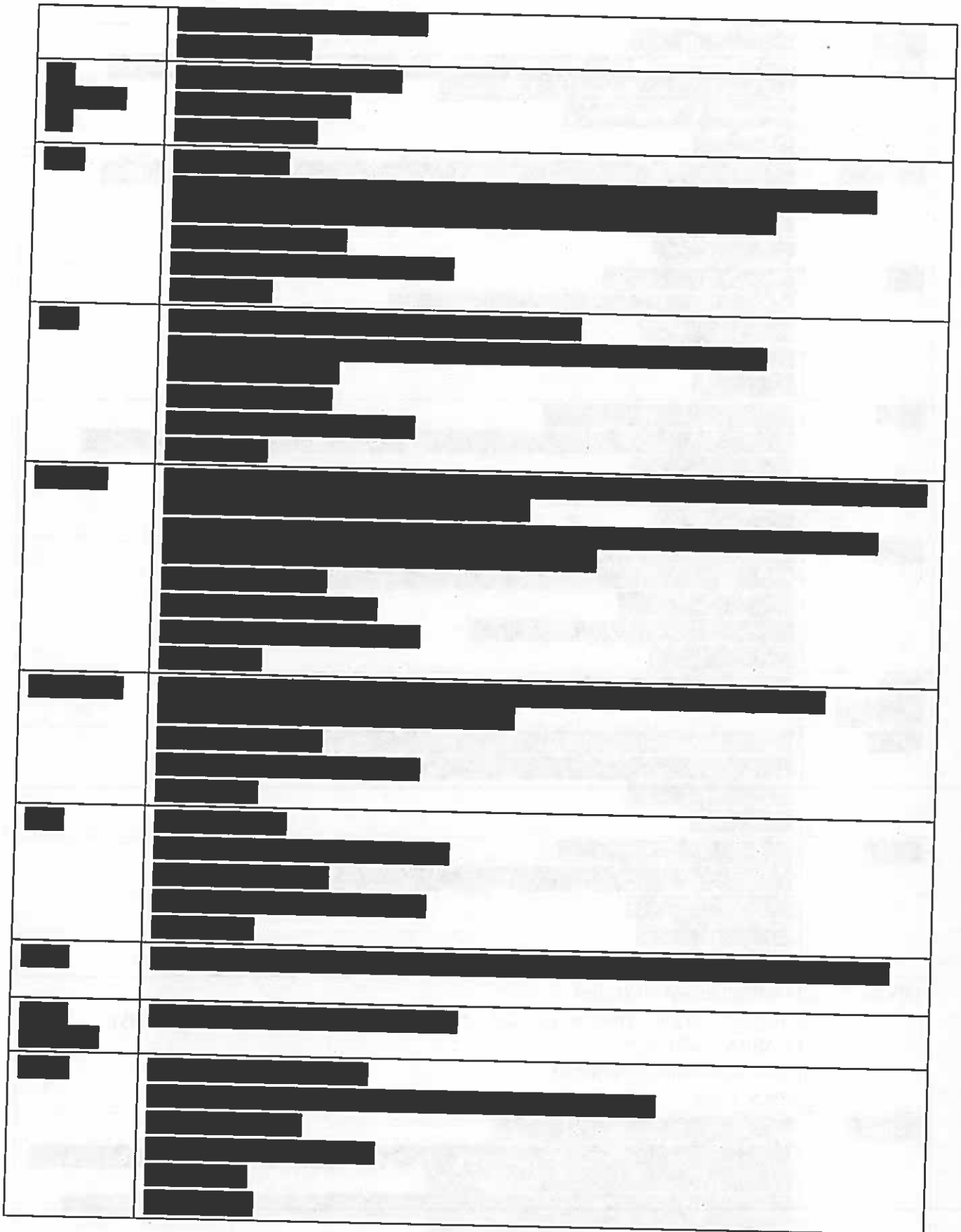
The closing conference began with a discussion of the topics needing clarification. The inspection team provided Chemours with a list of information that would need to be sent to the EPA and ERG after the inspection. A TSCA Receipt for Samples and Documents, EPA Form 7740-1 (See Exhibit A4 – TSCA Receipt for Samples and Documents) was created for the documents the inspection team collected during the inspection. Lastly, the inspection team discussed the EPA and ERG next steps which would be a review of the information provided by Chemours and potential requests for further information. The inspection concluded at approximately 12:30 pm.

3. FINDINGS

3.1. Introduction

The findings discussed below are based on statements and observations made during the inspection and on information provided by Chemours after the inspection.

For consistency and clarity, chemical substances referenced in this report will be referred to as follows from this point forward regardless of how the chemical substances are referred to in referenced documents and diagrams, unless otherwise identified:



[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
PPVE	Perfluoropropyl vinyl ether Systematic Name: Propane, 1,1,1,2,2,3,3-heptafluoro-3-[(1,2,2-trifluoroethenyl)oxy]- CASRN: 1623-05-8 Molecular Formula: C5F10O PMN: None
[redacted]	[redacted]

	[redacted]

3.2. TSCA Section 4 Evaluation

Based on Chemours' raw material lists for 2015 and 2016, Chemours purchased [redacted] from a domestic supplier. The chemical substance was once subject to a [redacted]. The [redacted] Chemical was used at the Facility in the production of [redacted]. The chemical was sent offsite for incineration as part of the material collected in the waste fluorocarbon system.

3.3. TSCA Section 5 Evaluation

3.3.1. PPVE Process

3.3.1.1. PPVE Process Discussion

[redacted], DuPont and later Chemours in 2015, manufactured PPVE and [redacted] for commercial use. PPVE and [redacted] are manufactured in the PPVE process. Based on the intended use, PPVE and [redacted] are subject to TSCA. The PPVE production process involves the following steps: [redacted]. For a detail description of the production of PPVE and [redacted], see: (1) Section *3.4.5.2 of this report ([redacted] Discussion);* (2) Exhibit B3 - PPVE Process Narrative); (3) Exhibit A7 -PPVE Flow Chart; and (4) Exhibit B2 - [redacted].

During the inspection, Chemours provided a flow chart of the PPVE process. The PPVE Flow Chart indicates that either [redacted] or [redacted] may be present in the NPDES effluent discharged into the Cape Fear River depending on the pH level of the final effluent to outfall 002. For details on the release of [redacted] or [redacted] as discussed during the inspection, see Exhibit A7 - PPVE Flow Chart.

During the inspection, the inspection team requested a written detail summary of the PPVE process. On July 31, 2017, Chemours submitted to Region 4 and ERG a written summary of the PPVE process (See Exhibit: B3 - PPVE Process Narrative). The PPVE Process Narrative stated [redacted]

Based on the PPVE Process Narrative, [redacted]

[redacted].

According to statements made by Mr. Johnson during the inspection, the PPVE process and its waste streams are not regulated by the Consent Order for the chemical substances manufactured or processed for commercial purposes in the PPVE process.

3.3.1.2. PPVE Process Waste Stream

Based on Chemours' July 31, 2017, PPVE Process Narrative, [redacted]

In an effort to determine when Chemours first became aware of the release/forming of the GenX chemicals [redacted] in the WWTP or Cape Fear River, on August 15, 2017, Region 4 submitted a letter to Chemours regarding a description of the PPVE process. Region 4's request was as follows: "Regarding the PPVE process, when (date) did Chemours become aware that the GenX chemicals were being released to the Cape Fear River or formed in the Cape Fear River? For the period prior to the TSCA Inspection, if Chemours has analytic data/sample results of: (A) the earliest signs of [redacted] contamination in the PPVE sumps; or (B) earliest releases/forming of GenX chemicals in the Cape Fear River, please submit those records to the EPA."

On September 1, 2017, Chemours indicated [redacted] Chemours did not provide a direct response concerning the date/time period as to when they first became aware that [redacted] and/or [redacted] was released into the Cape Fear River or formed in the Cape Fear River. However, during the June 15, 2017, public meeting between Chemours and North Carolina local and state officials, Chemours indicated that DuPont was aware since 1980 that GenX was released into the Cape Fear River as a byproduct.

Chemours also provided analytic data for the time period covering June 14, 2017, and July 28, 2017 (See Exhibit B5 - Chemours letter to the EPA with analytical data).

During the inspection, the PPVE Flow Chart did not indicate that [redacted] was a component in the effluent that was released from Chemours WWTP to outfall 002. The PPVE Process Narrative provided by Chemours after the inspection indicated that [redacted]. For details on the formation and releases of the [redacted], see Exhibit B3 - PPVE Process Narrative. According to

Chemours, as discussed during the inspection, the PPVE process and its waste stream are not subject to the Consent Order.

For the PPVE process, Chemours did not provide any information on releases of [redacted]. Chemours did provide the following information: (1) [redacted] was sent to the waste fluorocarbon system (incineration) in 2016; and (2) the [redacted]

[redacted] efficient in removing [redacted] (based on stack testing). Assuming all the [redacted] is converted to [redacted] and is incinerated at the same efficiency as provided for the [redacted] waste streams, the percent released is [redacted] percent. Sufficient information is not available for the inspection team to calculate the [redacted] in/out of the [redacted]. Chemours also indicated that KOH scrubber wastes are no longer being sent to the WWTP (collected and incinerated/deep well injected).

Based on the information (records/discussions) provided by Chemours, there is no indication that Chemours informed the EPA of the PPVE process, as it relates to the presence of [redacted] and [redacted] in the effluent leaving the WWTP and the formation of [redacted] in the combined effluent going to outfall 002 which was ultimately discharged into the Cape Fear River.

Based on the PPVE Process Narrative, prior to June 21, 2017, [redacted]. The PPVE Process Narrative did not indicate how much or what percent of the waste was captured. (See Exhibit B3 - PPVE Process Narrative).

3.3.2. [redacted] Process

3.3.2.1. PMN, Issuance of Order and Notice of Commencement

On or about [redacted], DuPont submitted a consolidated PMN to the EPA for the manufacture of [redacted]. The EPA identified the PMNs as [redacted] respectively. Based on the information provided by Chemours, GenX is the technology used to identify the production process of the GenX chemicals. The GenX chemicals (PMN Substances) are manufactured in the [redacted] Process.

Based on the PMNs, the intended uses for the [redacted].

In addition, the intended uses for [redacted]

As referenced in the Preamble to the Consent Order (Preamble, Section V, EPA's Conclusions of Law), the following finding constitute the basis for the Consent Order: [redacted]. (See Exhibit B7- Consent Order, Section I).

The chemical substances [redacted] that are subject to the Consent Order are the same two chemical substances that are associated with the [redacted] process waste stream that were

either: (1) formed in the [redacted]; (2) formed in the [redacted]; or (3) formed in the Cape Fear River. During the PMN review period and during the negotiation of the Consent Order, Chemours did not provide any information to the EPA concerning: (1) the effluent (wastewater) from the PPVE process that contained some [redacted]; and (2) the [redacted] formed in the combined [redacted] or in the Cape Fear River.

On [redacted], EPA's Director of the Chemical Control Division (Jim Willis) signed the TSCA Section 5(e) Consent Order, and on [redacted], DuPont's representative (James Hoover) signed the Consent Order. The effective date of the Consent Order was [redacted]. (See Exhibit B7 - TSCA Section 5(e) Order [redacted].

On [redacted], DuPont commenced the first commercial production of [redacted] at the Facility. On [redacted], DuPont submitted to EPA's Office of Chemical Safety and Pollution Prevention (OCSPP), a TSCA Notice of Commencement (NOC) for [redacted]. (See Exhibit: B8 – TSCA NOC [redacted]).

On [redacted], DuPont commenced the first commercial production of [redacted] at the Facility. On [redacted], DuPont submitted an NOC to OSCPP for [redacted]. (See Exhibit: B9 – TSCA NOC [redacted].

The following products are associated with the two PMN substances: (1) [redacted] (GX903); and (2) [redacted] (GX905C, GX905D and GX902). (See Exhibit A9 - Document No. 0501F1908562817: Safety Data Sheet – GX902; Exhibit A10 - Document No. 0601F1908562817: Safety Data Sheet – GX905C; Exhibit A11 - Document No. 0701F1908562817: Safety Data Sheet – GX905D; Exhibit A12 - Document No. 0801F1908562817: Safety Data Sheet – GX903; and Exhibit A13 - Document No. 0901F1908562817: Copies of Product Labels (GX905D, GX902, GX903).

3.3.2.2. [redacted] *Process Discussion*

Based on the PPVE Process Narrative, [redacted] is produced in the PPVE process. The PPVE production process is located at the Vinyl Ether North area of the Facility. The [redacted] is transported from the PPVE process area via [redacted] for use as a [redacted] process for production of the PMN substances ([redacted]).

According to the [redacted] Process Summary, the production of [redacted] and [redacted] involves [redacted] steps including: [redacted]. In addition to the [redacted] process description below, for details on the production of the two PMN substances in the [redacted] process, see Exhibit B11 - [redacted] Process Flow Diagram and Exhibit B12 - [redacted] Process Summary.

[redacted]

[redacted]

Based on the discussions with Chemours during the inspection and as referenced in the [redacted] Process Flow Diagram, [redacted]. For details on the release, containment and disposal of effluent from the [redacted] process, see Exhibit B11 - [redacted] Process Flow Diagram and Exhibit B12 - [redacted] Process Summary.

In addition, as referenced in the [redacted] Process Summary regarding air emissions, [redacted] For details on air emissions, see Exhibit B11 - [redacted] Process Flow Diagram, Exhibit B12 - [redacted] Process Summary and Exhibit B42 - Air Emission Data.

The following feedstocks are used in the [redacted] process: (1 [redacted]; (2) [redacted]; and (3) [redacted].

The EPA regulates the manufacture, processing, use, distribution in commerce, disposal, and release of the GenX chemicals [[redacted] and [redacted] (GX902[redacted])], pursuant to the Consent Order.

3.3.2.3. TSCA 5(e) [redacted] *Consent Order Discussion*

Terms

Prohibition

Based on the Consent Order, DuPont/Chemours was prohibited from manufacturing or importing [redacted] and [redacted] beyond the production limits as referenced in the Consent Order unless they (DuPont/Chemours) conducted the studies referenced in the Consent Order and submit all the final reports. On or about [redacted], DuPont submitted to the EPA, the final reports for the trigger testing requirements as referenced in Section II (d) of the Consent Order. (See Exhibit B13 – DuPont December 10, 2010, Letter).

On April 27, 2011, DuPont submitted the [redacted] (See Exhibit B14 – DuPont April 27, 2011, Letter). On or about August 1, 2011, the EPA acknowledged the receipt of the studies and determined that [redacted]. The EPA's letter also indicated that DuPont had fulfilled its obligations under the Consent Order for [redacted] (See Exhibit B15 – EPA August 1, 2011, Letter)

Testing

TSCA Section 8(e) Reporting: Based on the Consent Order, any information on the PMN substances ([redacted]) which reasonably supports the conclusion that the PMN substances present a substantial risk of injury to health or the environment is required to be reported under the TSCA Section 8(e) policy statement found at 43 Federal Register 11110 (March 16, 1978), as amended at 52 Federal Register 20083 (May 29, 1987), shall reference the appropriate PMN identification number for the substance and shall contain a statement that the substance is subject to a consent order.

As indicated previously in the PPVE process discussion section of this report, based on the PPVE Process Narrative: [redacted] Subsequent to the inspection, Region 4 requested information from Chemours concerning the date when they became aware that the PMN substances were either released to the Cape Fear River or formed in the Cape Fear River. Chemours response referenced the date [redacted] they spun off from DuPont. For details on the release/forming of the PMN substances in the WWTP or Cape Fear River, see Exhibit B3 – PPVE Process Narrative.

As also indicated in the PPVE process discussion section of this report, on August 15, 2017, Region 4 requested additional information from Chemours as a follow up to the June 2017 inspection, The request was as follows: "Regarding the PPVE process, when (date) did Chemours become aware that the GenX chemicals were being released to the Cape Fear River or formed in the Cape Fear River? For the period prior to the TSCA Inspection, if Chemours has analytic data/sample results of: (A) the earliest signs of Dimer Acid Fluoride (DAF) contamination in the PPVE sumps; or (B) earliest releases/forming of GenX chemicals in the Cape Fear River, please submit those records to the EPA."

On September 1, 2017, Chemours' response indicated that [redacted], (See Exhibit B4 - Chemours September 1, 2017, letter to the EPA). Chemours did not indicate when they first became aware the [redacted] and/or [redacted] was released into the Cape Fear River and/or formed in the Cape Fear River. In addition, during the June 15, 2017, public meeting between Chemours and North Carolina's local and state officials, Chemours

indicated they have been aware since 1980, that GenX was released to the Cape Fear River as a byproduct. During the inspection, the Region 4 Inspection Team asked Chemours about the chemical substance that was discovered in the Cape Fear River. Chemours stated that [redacted].

Chemours did not provide any records or documentation in response to the EPA's requests regarding when they first became aware of the release/forming of the PMN substances ([redacted]) in the Cape Fear River.

Protection in the Workplace

Chemours has the following dermal protective items for use in the [redacted] process area: gloves; full body chemical protective clothing; chemical goggles or equivalent eye protection; and clothing which covers other exposed area of the arms, legs and torso. Chemours provided documentation demonstrating [redacted] (See Exhibit B16 – Chemours Permeation Testing).

Respiratory Protection: Initially, for the [redacted] process area associated with [redacted], the Consent Order required the use, at a minimum, of a [redacted]. On August 20, 2009, DuPont requested the EPA's approval to use [redacted] (See Exhibit B17 – DuPont August 20, 2009, Letter). On February 1, 2010, the EPA modified the Consent Order in response to DuPont's request by authorizing: [redacted]. In the February 1, 2010, letter, the EPA also approved DuPont's request to use [redacted]. (See Exhibit B18 – EPA February 1, 2010, Modification of Order).

New Chemical Exposure Limit (NCEL)

The NCEL section of the Consent Order details an [redacted]. In order to deviate from the respirator requirements, certain criteria must be met:

[redacted]

As stated in the Protection in the Workplace, Respiratory Protection discussion above, the EPA reviewed DuPont's request and stated the use of [redacted] met the *Selection of Appropriate Respiratory Protection* for measured concentrations less than or equal to [redacted] NCEL.

Performance Criteria for Sampling and Analytical Method

The initial calibration language in the Consent Order was also modified. The original language stated: "… the initial calibration shall at a minimum consist of five (5) calibration standards…" The revised Consent Order states the method utilized six calibration standards. Further, the modified order states "… modified calibration ranging from 0.01 to 0.2 x NCEL." Lastly, the Subsequent Calculation text was changed to reflect that the spike must be prepared at [redacted].

Manufacturing

According to the Consent Order, DuPont/Chemours shall not cause, encourage, or suggest the manufacture or import of the PMN substances by any other person. This prohibition shall expire 75 days after promulgation of a final Significant New Use Rule (SNUR) governing the [redacted] and [redacted] under Section 5(a)(2) of TSCA unless DuPont/Chemours is notified on or before a Federal Court action occurs seeking judicial review of the SNUR. Once this prohibition expires, DuPont/Chemours shall notify each person whom it causes, encourages or suggests to manufacture or import the [redacted] and [redacted] of the existence of the SNUR. To date, no SNUR has been promulgated for either chemical EPA identifies as [redacted] or [redacted].

Control of Effluent and Emissions (During the Manufacture of [redacted] and [redacted])

The Consent Order states that DuPont/Chemours "shall recover and capture (destroy) or recycle" the [redacted] and [redacted] "at an overall efficiency of 99% from all the effluent process streams and air emissions (point source and fugitive)."

Based on the [redacted] Process Flow Diagram and [redacted] Process Summary, the [redacted]. Chemours stated that no effluent from the [redacted] process goes to the WWTP.

Regarding the air emissions from the [redacted] process, the [redacted].

For detail, see Exhibit B11 - [redacted] Process Flow Diagram and Exhibit B12 - [redacted] Process Summary.

As reference in the [redacted] process discussion, the air emissions estimate from the [redacted] process is [redacted]. For details on the [redacted] releases (effluent and emission), see the [redacted] process discussion above. In addition, for details on the PPVE release, see the PPVE process discussion above.

Distribution

The Consent Order states DuPont/Chemours shall distribute the [redacted] and [redacted] only to a person who has agreed in writing (prior to distribution) to:

1. Comply with the same requirements and restrictions stated in the Protection in the Workplace and the NCEL sections of the Consent Order;
2. Distribute the [redacted] and [redacted] only to a person who will either recover and capture (destroy) or recycle the [redacted] and [redacted] from all effluent process streams and air emissions (point source and fugitive) at an overall efficiency of 99%; and
3. Distribute the [redacted] in aqueous dispersion of the polymer product or on a heat treated solid product such that the contents polymer residual [redacted] and [redacted] total (anion peak in the MS/MS) are below [redacted] level using the Accelerated Solvent Extraction (ASE) method.

DuPont/Chemours may distribute the [redacted] and [redacted] outside of DuPont/Chemours for temporary transport and storage. Based on the records associated with the distribution and users of [redacted] and [redacted], there was no information showing that any of the PMN substances were temporary transported and stored. The distribution records for both PMN substances show that Chemours shipped them to their production sites in Deep Water, New Jersey (Chambers Works); Washington, West Virginia (Washington Works); or the substances were exported to foreign countries.

Review of safety data sheets for the [redacted] and all products containing the [redacted] indicate distribution of all products to be in aqueous dispersion form. A visual inspection of the [redacted] product storage area by the Region 4 Inspection Team found only final product containers with aqueous products.

Recordkeeping

The Consent Order states that DuPont/Chemours "shall maintain records until 5 years after the date created and shall make them available for inspection and copying by the EPA in accordance with Section 11 of TSCA." The records associated with Chemours compliance with the Consent Order and other sections of TSCA were requested during the inspection and were either provided during the inspection or following the inspection. The records provided to the EPA covered activities that occurred before July 1, 2015, (the date Chemours spun off from DuPont) and activities that occurred on or after July 1, 2015. However, when the EPA requested records pertaining to: (1) when Chemours became aware that the GenX chemicals were being released to the Cape Fear River or formed in the Cape Fear River; and (2) the analytic data/sample results associated with signs of [redacted] contamination in the PPVE sumps, Chemours stated: "[redacted]. Prior to that [redacted]."

Request For Pre-inspection Information

The Consent Order states that the EPA may conduct compliance inspections of DuPont/Chemours facilities and conveyances associated with the [redacted] and [redacted]

[redacted], and that the EPA may contact DuPont/Chemours "in advance to request information pertinent to the scheduling and contact of such inspections." Prior to the inspection, the EPA did contact Chemours to schedule the inspection and provided information requests as part of the NOI letter. Chemours provided most of the information requested in the NOI letter during the inspection. Information that was not readily available to Chemours during the inspection was provided to the inspectors following the inspection. Subsequent to the inspection, Region 4 submitted several information requests to Chemours and Chemours responded to the requests in phases.

Successors Liability Upon Transfer of Consent Order

On or about February 6, 2015, DuPont submitted a TSCA Notice of Transfer to the EPA regarding the manufacturing rights and liabilities associated with [redacted] and [redacted]. On or about July 1, 2015, Chemours spun off from DuPont.

3.3.3. Non-GenX Evaluation

3.3.3.1. Exemptions

Low Volume

Based on the records or statements provided to the EPA by Chemours, the Facility did not manufacture or import any chemical substances that were subject to a low volume exemption.

Research and Development

Based on the records or statements provided to the EPA, Chemours did not engage in any research and development activities associated with new chemical substances at the Facility.

Polymer

Based on the records or statements provided to the EPA, Chemours did not submit any polymer exemption notices to the EPA.

3.3.3.2. Bona Fide Intent

Based on the records or statements provided to the EPA, within the past two years, Chemours did not submit any bona fide intent to the EPA for the Facility.

3.3.3.3. Significant New Use Rules

Based on the records provided to the EPA, Chemours manufactured three chemical substances that are subject to a SNUR: (1) [redacted]; (2) [redacted]; and (3) [redacted].

[redacted]

Based on the results of the EPA's review of Chemours' production records and TSCA 2016 Chemical Data Reporting (CDR) submission, Chemours manufactured [redacted] is subject to a SNUR promulgated at 40 CFR § 721.[redacted]. The effective date of the [redacted] SNUR is [redacted]. Pursuant to 40 CFR § 721.[redacted], the significant new use for [redacted] is any use other than as an [redacted]. Pursuant to 40 CFR § 721.[redacted], an [redacted] is defined as a process that is designed and operated so that [redacted]. A process with [redacted].

Chemours indicated in their August 22, 2017, letter to the EPA: "[redacted]. In 2015, approximately [redacted] of the quantity of [redacted] manufactured at Fayetteville Works was not used on site. Greater than [redacted]. The remaining quantities (i.e., approximately [redacted] pounds) were shipped from Fayetteville Works to [redacted]. Chemours understands that [redacted]." (See Exhibit B19 - Chemours August 21, 2017, Letter).

Based on the process description, flow diagram and use of [redacted], Chemours manufactured [redacted] at the Facility.

The [redacted] report indicated that Chemours manufactured [redacted] pounds of [redacted]. In 2015, approximately [redacted] was used at the Facility and the [redacted]. (See Exhibit B20 – 2016 Amended CDR).

Based on records submitted to the EPA, Chemours provided documentation (Safety Data Sheet) informing the following customers that [redacted] was subject to a SNUR:

[redacted]

The Facility used [redacted]. (See Exhibit B21- Flow Diagrams and Production day/volume).

The columns in the tables below reference: (1) the [redacted] production processes; and (2) CASRNs of the substances (intermediates/raw materials/end products) present in the production of the [redacted].

[redacted] Production Processes	CASRNs of the Substances Present in [redacted] Processes
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

[redacted] Production Processes	CASRNs of the Substances Present in [redacted] Processes
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Chemours used [redacted] in each of the [redacted] processes referenced in the tables above. As of [redacted], (the effective date), [redacted] was subject to a SNUR promulgated at 40 CFR § 721. [redacted]. Pursuant to 40 CFR § 721. [redacted], a significant new use [redacted]. As referenced in 40 CFR § 721. [redacted], an [redacted].

The North Carolina Department of Environmental Quality (NC DEQ) obtained air emission estimates data for the PPVE North/South and [redacted] process areas generated from Chemours' website. The air emission estimates projected the potential for the release of nine chemical substances associated with the [redacted] processes. (See Exhibit B22- Air Emission Estimates).

The following CASRNs are [redacted] that are present in the [redacted]. Chemours' air emission estimates for 2012 through 2016 projected the release of these chemical substances when used in a [redacted] production process.

The table below (2012 – 2016 air emissions estimates) references: (1) Chemours designated Emission Point IDs; (2) the substances present in the [redacted] that could potentially be released to the air; and (3) projected annual releases (pounds) of the substance present in the [redacted] processes.

Emission Point ID	Substances Present in [redacted] Processes Released to Air	2012 (Pounds)	2013 (Pounds)	2014 (Pounds)	2015 (Pounds)	2016 (Pounds)
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1, NEP-Hdr2 and AEP-A1	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
NEP-Hdr1 & NEP-Hdr2	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Based on Chemours' air emission estimates, it is projected that the chemical substances referenced above (substances present in the [redacted] processes) could potentially be released to the air. Pursuant to 40 CFR § 721.[redacted] (SNUR), [redacted] can only be used [redacted]

[redacted]. The projected release of significant quantities of air emissions associated with the chemical substances referenced in the table above, may constitute a significant new use of [redacted]. Pursuant to 40 CFR § 721.5(a)(1), "A person who intends to manufacture, import, or process for commercial purposes a chemical substance identified in a specific section" 40 CFR Part 721, Subpart E, "and intends to engage in a significant new use of the substance identified in that section" must submit a significant new use notice (SNUN) as specified under the provisions of Section 5(a)(1)(B) of TSCA, 40 CFR Part 720 and 40 CFR § 721.25. Based on a review of the EPA records regarding submissions for [redacted], DuPont/Chemours did not submit a SNUN to the EPA. Based on the projected air emission release (estimates) associated with the chemicals present in the [redacted] processes, Chemours did not submit SNUN to the EPA at least 90 days prior to using [redacted] as an [redacted]. The [redacted] processes are located in the [redacted] process areas.

Based on Chemours records associated with the use of [redacted], between July 1, 2015 and June 29, 2017, Chemours used [redacted] days for a combined total of [redacted] pounds of [redacted]. For those days when Chemours used/consumed [redacted], the daily amount consumed ranged from [redacted] pounds. To determine the amount of [redacted] that was actually used on a daily basis between July 1, 2015 and June 29, 2017, see Exhibit B40 - [redacted] Production and Use.

[redacted]

In [redacted], DuPont submitted a consolidated PMN to the EPA to manufacture [redacted]. The EPA identified the PMNs as [redacted] and [redacted]. The two PMN substances are present in the [redacted] production process (See Exhibit B37- Block Diagram for [redacted]).

The EPA's confidential records associated with DuPont's consolidated PMN for [redacted] available through EPA's Virtual Desktop Infrastructure (VDI) system identifies [redacted] as a [redacted] used in the production of [redacted]. A review of the [redacted] process provided to the EPA subsequent to the inspection revealed that [redacted] was not included in the [redacted] Summary Block Diagram also provided (See Exhibit: B23 Chemours September 6, 2017, letter and [redacted] Summary Block Diagram). [redacted] is manufactured in Chemours' [redacted] process (See Exhibit B38-[redacted] Flow diagram and [redacted] information in EPA's VDI system). [redacted] is produced for commercial purpose. In addition, based on Chemours' March 29, 2018, letter (see Exhibit 41 – March 29, 2018 Letter), [redacted] is also used as [redacted].

As of [redacted] was subject to a SNUR promulgated at 40 CFR § 721.[redacted]. Based on the SNUR promulgated at 40 CFR § 721.[redacted], [redacted]. Manufacture, import, or processing of [redacted] subject to reporting as a significant new use.

Chemours' letter dated September 6, 2017, listed several factors (use, production, pollution prevention, and hazard assessment) associated with the PMN submission as it relates to [redacted]. See Exhibit: B23 – Chemours September 6, 2017 Letter.

Based on the EPA records, there is no record on file indicating that either Chemours or its predecessor (DuPont) submitted a SNUN to the EPA for [redacted]. Chemours' September 6, 2017, letter indicated:

[redacted]

(7) [redacted]

In its September 6, 2017 Letter, Chemours did not state that a SNUN was submitted to the EPA for [redacted]. Instead, in the letter/summary, Chemours stated that, "[redacted]" For detail and confirmation of Chemours statement, see Exhibit B23 - September 6, 2017, Letter and Exhibit B4 - September 1, Letter. Pursuant to 40 CFR § 721.5(a)(1), a person who intends to manufacture, import, or process for commercial purposes a chemical substance identified in a specific section in 40 CFR Part 721, Subpart E, and intends to engage in a significant new use of the substance identified in that section must submit a SNUN as specified under the provisions of Section 5(a)(1)(B) of TSCA, 40 CFR Part 720 and 40 CFR § 721.25. Based on the [redacted] production records, on July 16, 2015, Chemours exceeded the SNUR [redacted]. Based on EPA's review, Chemours did not submit a SNUN as required pursuant to the provisions of TSCA Section 5(a)(1)(B), 40 CFR Part 720 and 40 CFR § 721.25.

Chemours letter dated October 4, 2017, stated [redacted]. The October 4, 2017 Letter (Exhibit B34) also stated if the [redacted]

Based on production records for [redacted] and [redacted], between July 5, 2015, and July 16, 2015 (11 day period), Chemours manufactured a total of [redacted]. During this period (July 5, 2015 and July 16, 2015), the production of [redacted] generated [redacted] percent ([redacted]) [redacted]. According to the March 29, 2018 Letter (Exhibit B41), [redacted] was used [redacted] was manufactured for commercial purpose. Based on [redacted] production records, on July 16, 2015, Chemours [redacted] threshold [redacted]. Between July 16, 2015, and June 29, 2017, Chemours manufactured [redacted]. Between July 16, 2015, and June 29, 2017, the daily production range [redacted]. To determine the amount of [redacted] that was produced on a daily basis between July 16, 2015, and June 29, 2017, see Exhibit B40 - [redacted] Production and Use and Exhibit B41 – March 29, 2018 Letter.

A review of the P&IDs shows [redacted] and [redacted] were transferred from the [redacted] unit to [redacted] unit by way of [redacted]. For details on the transfer of [redacted] and [redacted], see Exhibits B43 and B44 - P&ID ([redacted]).

[redacted]

The production records indicated [redacted] was manufactured at the Facility. [redacted] is subject to a SNUR promulgated at 40 CFR § 721.[redacted]. The effective date of the SNUR for [redacted] was [redacted]. The significant new use for [redacted] includes the manufacture (including import) or processing for [redacted]. The manufacture (including import) or processing of [redacted].

Chemours indicated [redacted]. In the reaction process, [redacted]. Based on Chemours' 2016 CDR report, [redacted] was used at the Facility as [redacted].

[redacted]

In [redacted] DuPont submitted a PMN to the EPA to manufacture a chemical that the EPA identified as [redacted] for use as [redacted]. At the time of the PMN submission, [redacted] was listed on the TSCA inventory, but the [redacted] was not listed on the TSCA inventory (See Exhibit: B25- Chemours October 13, 2017, Letter).

Based on Chemours' 2016 CDR report, between 2012 and 2015, DuPont/Chemours manufactured the [redacted]. This means DuPont manufactured [redacted] before they manufactured the [redacted].

A review of EPA's confidential database (VDI) revealed DuPont did not submit a Notice of Commencement (NOC) to EPA when [redacted] was manufactured for commercial purpose as

an [redacted]. This means [redacted] was not added/listed on the TSCA inventory.

The production of [redacted]. Between October 10, 2015, and November 27, 2015, Chemours manufactured [redacted] for commercial purpose. The production record did not reference the amount of [redacted] that was produced during the production of [redacted]. During the production period (October 10, 2015, and November 27, 2015), the record did not indicate the actual number of days [redacted] was produced. For details on the production volume associated with of [redacted], see Exhibit B26- July 31, 2017 Letter).

Based on EPA's certified statement ([redacted]), [redacted] is not listed on the TSCA inventory. According to the certified statement, [redacted] is regulated under a [redacted] (See Exhibit B27- TSCA Certified Statement). Pursuant to 40 CFR Part 720, a chemical substance that is not listed on the TSCA inventory is classified as a new chemical substance. Pursuant to 40 CFR Part 720, manufacturers, including importers, must submit a PMN for a new chemical substance at least ninety (90) days prior to the first commercial production.

A review of the [redacted] process flow diagram shows [redacted]. (See Exhibit B25- Chemours October 13, 2017, Letter). Based on the [redacted] is actually an [redacted] that is used in the production of the [redacted] Since [redacted] was not listed on the TSCA Inventory when it was produced for commercial purpose, Chemours was required to submit a PMN to the EPA for [redacted] pursuant to 40 CFR § 720,22. Based on EPA's confidential records (VDI), Chemours did not submit a PMN for [redacted].

3.4. TSCA Section 8 Evaluation

3.4.1. Preliminary Assessment Information Rule (PAIR)

Based on the records provided to EPA, Chemours did not manufacture, import, or use any chemical substance that was subject to reporting under PAIR.

3.4.2. Allegation of Significant Adverse Reaction

Based on the discussions with Chemours representatives and review of the records for the past two years, there was no allegation of significant adverse reaction on file for the chemical substances manufactured, imported, processed or distributed at the Facility.

3.4.3. Health and Safety Studies

Based on the discussions with Chemours representatives regarding health and safety studies, Mr. Johnson indicated they would check with the corporate officials to confirm the status of studies. Chemours did not include any health and safety studies in their response.

3.4.4. Substantial Risk to Human Health/Environment

During the inspection, the inspection team inquired about: (1) documentation of allegations of adverse reactions that may be subject to TSCA Section 8(c) reporting; (2) a list of Section 8(d) health and safety studies submitted to EPA and copies of any known health and safety information that were not submitted to EPA; and (3) any substantial risk information not known to EPA (TSCA Section 8(e)). At the time of the inspection, Chemours indicated they had no such records as referenced above, and they would check with their corporate office in Delaware, and, if applicable, they would submit the records to EPA and ERG. No records pertaining to TSCA Sections 8(c), 8(d) or 8(e) were submitted to Region 4 or ERG.

As discussed in Section 3.3.1 (PPVE Process) above, the effluent from the PPVE process contains the PMN substance ( ) and depending on the pH level in the combined effluent to the outfall the may convert to the other PMN substance ( ) which is discharged into the Cape Fear River. During a public meeting on June 15, 2017, between Chemours and the New Hanover County Board of Commissioners, Chemours indicated that dating back to 1980; GenX (which Chemours referred to as a byproduct) was also a component in the wastewater discharged to the Cape Fear River.

The Consent Order (page 4, Testing) indicates that any information on the PMN substances (and) which reasonably supports the conclusion that the PMN substances present a substantial risk of injury to health or the environment is required to be reported under EPA's TSCA Section 8(e) policy statement at 43 Federal Register 11110 (March 16, 1978) as amended at 52 Federal Register 20083 (May 29, 1987), and shall reference the appropriate PMN identification number for this substance and shall contain a statement that the substance is subject to a consent order. (See Exhibit A15 – Federal Register, May 29, 1987)

As discussed in the PPVE process (Section *3.3.1.2),* Chemours did not provide any record as to when they first became aware that the PMN substances (and) were either released from the WWTP or formed in the Cape Fear River.

3.4.5. Chemical Data Reporting

3.4.5.1. CDR Introduction

On September 20, 2016, Chemours submitted a TSCA 2016 CDR report for chemical substances. Based on EPA's review of Chemours' 2015 production volumes and comparison with the submitted CDR report, the following chemical substances were not reported to two significant figures of accuracy on the 2016 CDR: (1) ; (2) ; and (3) . After June 29, 2017, without notice from the EPA, on August 3, 2017, Chemours submitted an amended CDR (revising production volumes) for: ; ; and . In addition to Chemours 2016 CDR submission, Chemours did not include the following chemical substances on the 2016 CDR: (1) ; (2) ; and (3) .

3.4.5.2. CDR Discussion

Based on the 2015 production records, Chemours manufactured pounds of . The original 2016 CDR report indicated pounds of

were produced in 2015. The amended 2016 CDR report indicated [redacted] pounds of [redacted] were produced (See Exhibit B28 - 2016 Original CDR and Amended CDR).

Based on the amended 2016 CDR and EPA's calculation, the original 2016 CDR was not reported to two significant figures of accuracy.

For calendar year 2015, [redacted] was over-reported on the 2016 CDR.

[redacted]

Based on the 2015 production records, Chemours manufactured [redacted] pounds of [redacted]. The original 2016 CDR report indicated [redacted] pounds of [redacted] were produced in 2015. The amended 2016 CDR report indicated [redacted] pounds of [redacted] were produced (See Exhibit: B29 -2016 Original CDR and Amended CDR).

Based on the amended 2016 CDR and EPA's calculation, the initial 2016 CDR was not reported to two significant figures of accuracy.

For calendar year 2015, [redacted] was under-reported on the 2016 CDR.

[redacted]

Based on the 2015 production records, Chemours manufactured [redacted] pounds of [redacted]. The 2016 original CDR report indicated [redacted] pounds of [redacted] were produced in 2015. The amended 2016 CDR report indicated [redacted] pounds of [redacted] were produced (See Exhibit: B30 - 2016 CDR, and amended CDR).

Based on the amended 2016 CDR, and EPA's calculation, the initial 2016 CDR was not reported to two significant figures of accuracy.

For calendar year 2015, [redacted] was under reported on the 2016 CDR.

[redacted]

Based on the PPVE Process Narrative, the PPVE Flow Chart and the [redacted] Production Block Diagram, during the first step of the [redacted] process, the [redacted] (See Exhibit A7 - PPVE Flow Chart, Exhibit B2 - [redacted] and B3 - PPVE Process Narrative).

In the second step of the PPVE process, the [redacted]

[redacted]. (See Exhibit A7 - PPVE Flow Chart, Exhibit B2 - [redacted] Production and B3 - PPVE Process Narrative).

In an effort to confirm whether the [redacted] used to produce [redacted] is actually [redacted], on August 14, 2017, Region 4 requested additional information from Chemours via email and in a letter dated August 15, 2017 (See Exhibit B31 - EPA August 15, 2017 Letter). The request was as follows: "Regarding the PPVE process, the flow diagram shows that the [redacted] goes either to a [redacted] for use in the [redacted] production process or it is used in the subsequent steps to produce [redacted]. Based on the review of the PPVE diagram, it appears that the [redacted] that is used to produce [redacted] can be classified as a [redacted]. If Chemours classified the [redacted] as an [redacted], please explain the isolation of the [redacted] in the [redacted] process."

On August 22, 2017, Chemours provided an explanation on the 2016 CDR report for [redacted]. The statement is as follows: "The quantities of [redacted] that are used [redacted]. However, [redacted].

For purposes of the 2016 CDR report, Chemours indicated that they [redacted]. Chemours is treating the entire production of [redacted] as an isolated intermediate. (See Exhibits: B33- Chemours July 31, 2017 letter).

Region 4 first became aware there was an additional step/process between the [redacted] when Chemours submitted a response letter dated August 22, 2017. As a result, on September 20, 2017, Region 4 requested the following information from Chemours: "[redacted]

On October 4, 2017, Chemours responded to Region 4's request. Chemours response indicated: [redacted]

Based on the Chemours October 4, 2017 letter, in 2015, [redacted] (See Exhibit B34 – Chemours' October 4, 2017, Letter and Exhibit B35 – PPVE Flow Chart).

In an attempt to identify the actual location of the [redacted], Region 4 and ERG reviewed the PPVE P&ID. Based on the review of the P&ID, the EPA was able to locate [redacted]. However, on the same day (August 14, 2017) that Region 4 inquired about the [redacted] of [redacted] process, Chemours made a revision to the system associated with [redacted]. (See Exhibit B36 - P&ID # W553421). P&ID # W553421 shows that on August 14, 2017, there was a revision associated with the [redacted]. Based on the EPA's review of the [redacted] production process, Chemours classified [redacted] as an [redacted].

[redacted]

In [redacted], DuPont submitted a consolidated PMN to EPA to manufacture [redacted] and [redacted]. As referenced in the PMN, [redacted] was used as an [redacted] for production of [redacted]. The EPA identified the PMNs as [redacted]. DuPont submitted a TSCA NOC for both PMN substances. In 2012, DuPont submitted a TSCA 2012 CDR report to the EPA for both PMN substances [redacted] that were produced at the Facility.

In 2015, Chemours used the same production site (the Facility) to produce both chemicals substances. Chemours included [redacted] on the TSCA 2016 CDR, but failed to report the [redacted] ([redacted]) that was used to produce [redacted].

Chemours' Block Diagram for [redacted] shows [redacted] as a [redacted] being transferred to a [redacted] Based on the PMN submission, [redacted] is an [redacted]. (See Exhibit B37 - [redacted] Block Diagram).

Based on the Chemours' March 29, 2018 Letter (Exhibit B41), Chemours does [redacted] generated as a [redacted], The March 29, 2018 Letter also indicated between July 1, 2015, and June 29, 2017, Chemours [redacted]. Based on the 2015-2017 production volume for [redacted], Chemours manufactured a reportable [redacted] in 2015. Pursuant to 40 CFR § 711.5, a report must be submitted for any chemical substance that is on the TSCA Master Inventory File at the beginning of a submission period described in § 711.20, unless the chemical substance is specifically excluded by § 711.6. [redacted] was on the TSCA Master Inventory at the beginning of a submission period and based on the [redacted] submission, [redacted] was not exempt from the 2016 CDR requirements. Chemours did not include [redacted] in the Facility's 2016 CDR, as required by 40 CFR § 711.5.

[redacted]

In 2015, Chemours manufactured [redacted] during the production of [redacted]. Based on the [redacted] Block Flow Diagram, [redacted] is a [redacted] that is transferred to the [redacted] for use in the production of either [redacted] or [redacted] (See Exhibit: B38 - [redacted] Block Flow Diagram). In addition, the [redacted] production summary indicated certain [redacted] generated during the [redacted] reaction [redacted] also are [redacted] (See Exhibit B4 - Chemours September 1, 2017 Letter to the EPA).

Based on the information referenced in the [redacted] Block Flow diagram and written response (summary), [redacted] is a [redacted] that was transferred from the [redacted]. In addition, as referenced in [redacted] is also listed as a [redacted] for production of [redacted]. For details on the use of [redacted], see [redacted] and [redacted] in EPA's VDI and Exhibit B41).

Based on the 2016 CDR approximately [redacted] were produced in 2015. Based on the Chemours' March 29, 2018 Letter, the production of [redacted]. That meant that approximately [redacted] were produced in 2015 (See Exhibit B41). Chemours' letter dated October 4, 2017, stated [redacted] are produced as [redacted] unit and [redacted]. The October 4, 2017 Letter (Exhibit B38) also stated if the [redacted]. For details on the production, use and release/disposal of [redacted] see Exhibit B34 - October 4, 2017 Letter. Chemours did not include [redacted] in the Facility's 2016 CDR that was submitted to the EPA, as required by 40 CFR § 711.5. Based on Chemours 'March 29, 2018 Letter (Exhibit 41), [redacted] is used as an [redacted] to produce [redacted].

A review of the P&IDs shows [redacted] and [redacted] were transferred from the [redacted]. For details on the transfer of [redacted], see Exhibits B43 and B44 - P&ID ([redacted]).

[redacted]

In 2015, Chemours manufactured [redacted] during the production of [redacted]. Based on the [redacted] Block Flow Diagram, [redacted] that is transferred to the [redacted] (See Exhibit B38 - [redacted] Block Flow Diagram). In addition, the [redacted] production summary indicated certain [redacted] process also are removed during [redacted]. (See Exhibit B4 - Chemours September 1, 2017, Letter to the EPA).

Based on the information referenced in the [redacted] Block Flow Diagram and Chemours' written response (summary), [redacted] that is transferred from the [redacted] process to the [redacted]. In addition, as referenced in P[redacted], [redacted] for production of [redacted]. (See [redacted] in EPA's VDI and Exhibit B37 - [redacted] Block Diagram).

Based on the 2016 CDR, approximately [redacted] were produced in 2015. Based on Chemours March 29, 2018 Letter, the production of [redacted]. This means approximately [redacted] were produced in 2015 (See Exhibit B41). Chemours' letter dated October 4, 2017, stated [redacted] are produced as [redacted]. The October 4, Letter (Exhibit B34), also stated [redacted] from the [redacted] unit are treated as a waste and vented to and captured by the

[redacted]. For details on the production, use and release/disposal of [redacted], see Exhibit B34 - October 4, Letter. Chemours did not include [redacted] in the 2016 CDR that was submitted to the EPA as required by 40 CFR § 711.5. Based on Chemours' March 29, 2018 Letter (Exhibit B41), [redacted] is used as an [redacted] to produce [redacted].

A review of the P&IDs shows [redacted] were transferred from the [redacted]. For details on the transfer of [redacted] and [redacted], see Exhibits B43 and B44 - P&ID ([redacted]).

[redacted]

In 2011, DuPont manufactured [redacted] at the Facility. DuPont included [redacted] in their 2012 CDR. In 2015, Chemours used the same production site (the Facility) to produce [redacted] as an [redacted] for the production of [redacted] and [redacted]. For details on the production/use of [redacted], see Exhibit B 45 - Co-production of [redacted].

Based on the production volume for the other [redacted] that is used in the [redacted] and [redacted] processes, Chemours may have produced a reportable quantity (greater than 25,000 pounds) of [redacted]. Pursuant to 40 CFR § 711.5, a report must be submitted for any chemical substance that is on the TSCA Master Inventory File at the beginning of a submission period described in § 711.20, unless the chemical substance is specifically excluded by § 711.6. [redacted] was on the TSCA Master Inventory at the beginning of a submission period. Chemours did not include [redacted] in the Facility's 2016 CDR, as required by 40 CFR § 711.5. Based on Exhibit B 45, [redacted]

3.5. TSCA Section 12 Evaluation

Customers (foreign and domestic) that processed [redacted] (GX903 and Various Concentrations of [redacted] (GX902, GX905C and GX905D)):

GenX Acid (GX903) is shipped to Chemours Chambers Works facility in Deep Water, New Jersey.

GenX Salt (GX905C, GX905D & GX902) is shipped to Chemours Washington Works facility in Washington, West Virginia.

GenX Salt (GX905C, GX905D & GX902) is exported to the Netherlands.

GenX Acid (GX903) and GenX Salt (GX905C, GX905D & GX902) are exported to Japan. GenX Salt (GX905D & GX902) is exported to China.

GenX Salt (GX905D & GX902) is exported to India.

Export notices dating back to 2015 were submitted to the EPA (See Exhibit: B10 – GenX Customer List).

3.6. TSCA Section 13 Evaluation

As a follow up to the EPA's June 22, 2017, NOI, during the inspection, the EPA inspection team asked Chemours if the Facility imported any chemical substance in the past four years. See Exhibit A1- NOI. Chemours stated that all chemical import activities are controlled by the corporate office in Wilmington, Delaware. As a result, Chemours did not provide any records on the import of chemical substances associated with the Facility.

Subsequent to the inspection and through coordination with Region 4's Resource Conservation and Restoration Division, it was disclosed to Region 4's TSCA New and Existing Chemicals Program that the Facility received imported spent [redacted], a [redacted]. The importation of [redacted] was discussed further with representatives from EPA Headquarters Office of Pollution Prevention and Toxics (OPPT).

On January 22, 2018, OPPT submitted a written request for information to Chemours regarding the reclamation of [redacted] and [redacted]. The EPA requested the following information: (1) Time period (dates of reclamation); (2) The origin of the waste material ([redacted]) and the amount; (3) The reclamation process including process diagrams; (4) The name of the compounds and the amount processed daily; (5) The disposition of the reclaimed materials (end use); (6) The on-site emission point sources and daily release; and (7) Applicable statutory reporting requirements for the reclaimed materials ([redacted] and [redacted]).

On February 2, 2018, Chemours submitted their response to OPPT's concerns. On or about March 1, 2018, OPPT submitted a copy of Chemours' response to Region 4. Based on Chemours response, the spent [redacted] that was imported for reclamation was included on Chemours Corporate Headquarter 2016 CDR. A review of the EPA's confidential CDR database (VDI) revealed Chemours' Corporate Headquarter submitted a 2016 CDR report for the imported [redacted]. For details on the import and reclamation of [redacted] and [redacted], see Exhibit 46 - February 2, 2018 Letter.

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4.0. REPORT APPROVAL

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4/30/18

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